

Original Research

Received 27 June 2026

Revised 28 July 2026

Accepted 10 Aug 2026

Natural Resources for Human
Health 2026, Vol. 6 (17s): 1097–1111

KEYWORDS:

non-formal education, local
wisdom, technology
empowerment, tourism education
accessibility

Mediation Analysis of Technology Empowerment on the Relationship Between Local Wisdom-Based Non-Formal Education and Tourism Education Accessibility

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ABSTRACT: This study examines the contribution of non-formal education (NFE) based on local wisdom, with technology empowerment as a mediating variable, to the accessibility of tourism education. The study was motivated by the need to facilitate tourism learning without restrictions, harnessing the potential of non-formal education and the richness of local culture. The research population consisted of 141 managers of the Community Learning Center (CLC) in Banyuwangi, with a sample of 59 people determined using the Slovin formula and the disproportionate stratified random sampling technique. Data was collected through questionnaires and institutional records, with instruments proven to be valid and reliable through product-moment correlation tests and Cronbach's Alpha. Path analysis is used to test hypotheses. The results showed that the NFE variable based on local wisdom (X) partially had a significant effect on the accessibility of tourism education (Y), with a t-count value of 7.745 (significance 0.000). The technology empowerment variable (Z) also partially had a significant effect on the accessibility of tourism education (Y), with a t-count value of 6.829 (significance 0.000). Simultaneously, NFE based on local wisdom (X) and technology empowerment (Z) had a significant influence on the accessibility of tourism education (Y), with an F-count value of 29.138 (significance 0.000). It can be concluded that NFE based on local wisdom (X) has a significant influence on the accessibility of tourism education (Y) through the technology empowerment variable (Z). These findings underscore the crucial role of non-formal education and the use of technology in expanding tourism learning access relevant to the local context.

INTRODUCTION

Education is the foundation of community development, and outside of the formal school system, non-formal education (NFE) plays an important role. NFE is defined as education outside the school system, including family (informal) education, which functions as a complement, supplement, and substitute for formal education. NFE exists to meet the needs of educational services for diverse communities, ensuring that learning opportunities are available to every citizen without being limited by age or cost. This flexibility makes NFE particularly relevant in lifelong learning, especially for those with special conditions such as economic, geographical, social, or psychosocial limitations.

Banyuwangi Regency is the largest area in East Java, located at the eastern tip of Java Island. This region is rich in natural resources and various tourist destinations. With a varied landscape from highlands to lowlands, Banyuwangi has natural attractions like beaches, mountains, forests, and national parks. Famous destinations such as Ijen Crater with the blue flame phenomenon, Plengkung Beach (G-Land), ideal for surfing, and Sukamade Beach as a turtle habitat, show the wealth of Banyuwangi's natural tourism. In addition, Banyuwangi is rich in local wisdom and culture, such as the Osing Tribe, which has

a deep tradition of Seblang Dance rituals. The rapid development of tourism in Banyuwangi relies heavily on active community participation and increased awareness of the sector, although negative stigmas such as shamanic are still attached.

In an effort to develop tourism sustainably, the role of education is vital. Non-formal education, with its easily accessible and flexible characteristics, can be a strategic path to improve people's knowledge and skills related to tourism. However, this ease of access also needs to be supported by technology. Public awareness and ability to utilize technology can be a bridge that connects non-formal education based on local wisdom with the accessibility of tourism education. This study aims to measure the contribution of non-formal education based on local wisdom, mediated by technological empowerment, to the accessibility of tourism education. This is done to understand how these factors collectively facilitate people who want to learn about tourism without restrictions. Thus, the specific objectives of this study are: 1) Analyzing the partial influence of non-formal education based on local wisdom (X) on the accessibility of tourism education (Y). 2) Analyze the partial influence of technology empowerment (Z) on the accessibility of tourism education (Y). 3) Analyze the simultaneous influence of non-formal education based on local wisdom (X) and technological empowerment (Z) on the accessibility of tourism education (Y). 4) Analyzing the influence of non-formal education based on local wisdom (X) *through* technology empowerment (Z) on the accessibility of tourism education (Y).

LITERATURE REVIEW

Non-Formal Education (NFE)

Non-formal education (NFE) has emerged as a significant educational force in the postmodern era, complementing formal education and influencing the development of society (Romi & Schmida, 2009). The NFE encompasses diverse learning experiences outside of traditional academic settings, catering to diverse age groups and literacy levels (Prakapas & Devenytė, 2014). NFE is recognized as a facilitator of development and alternative education strategies (Butvilienė, 2014). Its potential extends to various contexts, including leisure activities, family involvement, and education for sustainable development (Alam et al., 2024). The NFE has also influenced formal education, which has adopted many of its theoretical assumptions and pedagogical practices (Hoppers, 2006). Furthermore, non-formal education (NFE) is important in civil society participation, particularly in school boards, encouraging learning experiences through community engagement (Latchem, 2018). As a field still in the development stage, NFE continues to challenge the concept of traditional education and shape the progress of society (Zemaitaityte, 2017).

The flexibility of the NFE in curriculum and methodology, as well as its ability to adapt to the needs and interests of learners, makes it different from formal education. (Gunga, 2002) also emphasizes that NFE has a high level of elasticity, openness to change, and readiness to adapt to a heterogeneous population with diverse educational needs. NFE can provide access for the entire community without age or cost restrictions, making it appropriate to achieve lifelong education goals. Furthermore, NFEs can provide high-quality education, even exceeding that available in formal schools, due to their ability to respond to the needs of specific individuals and groups in society. NFE is also participatory, involving students, families, and communities in implementing programs, and is inclusive of all children regardless of background or ability. These characteristics make NFE a strategic and responsive educational pathway, perfect for developing special skills as needed in the tourism sector, especially in diverse community settings.

Local Wisdom

Local wisdom represents the harmonious relationship between humans, nature, and the built environment, which is influenced by the cultural (Zuhri, 2024). Local wisdom is crucial in environmental preservation and sustainability (Yuniriyanti et al., 2020) in the era of globalization. Local wisdom adapts to technological advances while maintaining its true meaning and considering local characteristics, climate, and natural conditions (Arjaya et al., 2024). Passed down from generation to generation, local wisdom is deeply rooted in religion, culture, and tradition (Verawati & Ramdani, 2023). However, its significance diminishes because modern society often considers contemporary lifestyles superior (Jalil, 2018). Local wisdom can be found in various forms of cultural expression, including literature. In classical Persian texts, for example, poetry serves as a medium to explore the inner essence and convey cultural values (Zulyeno, 2020). Understanding the local wisdom of other nations can provide insight into their cultural values and heritage (Pesurnay, 2018). Local wisdom refers to local ideas, values, and views that are wise, full of wisdom, noble values, and unique, which are deeply embedded and followed by community members. Local wisdom guides people in meeting their living needs, facing problems, and improving their quality of life. In Banyuwangi

Regency, local wisdom has very different characteristics from other regions. An example is the tradition of the Seblang Dance ritual in Olehsari Village, which is interpreted as village cleansing and an expression of gratitude, becoming a symbol of deep local culture. Ethnic differences, such as the Osing, Javanese, and Madura tribes in Banyuwangi, also affect their patterns of routine and physical activity, as well as their talent potential.

Other research shows that the Osing tribe is still thick with traditional ceremonies, even though the younger generation's knowledge of culture is starting to fade due to technological advances. However, the values of local wisdom of the Osing Tribe, such as religiosity, love for the environment, cooperation, togetherness, equality, creativity, and responsibility, can be used as a source of learning. Kemiren Village, as a tourist village, is an example of how Osing culture is preserved and used for tourism. It is important to note that local wisdom is dynamic; It is acquired from life experience or inherited from generation to generation. It can be updated and adapted to current conditions influenced by globalization or foreign cultures. This dynamic nature allows people to adapt to outside cultures according to their character. Integrating this dynamic local wisdom with non-formal education and technology offers a new theoretical perspective on sustainable development.

Technology Empowerment

Technology is crucial in empowering women, especially in rural areas, by reducing workload and increasing productivity (Singh, 2010). Technology enhances entrepreneurial capabilities and opens up new opportunities for women's economic participation, although the level of technological empowerment among women entrepreneurs is often low (Singh, 2010). Information technology options for achieving empowerment vary across cultures, with Japanese employees preferring media-rich technology while American employees preferring collaborative technology (Downing et al., 2003). Technology empowers women by saving time and effort, building skills, and transforming work infrastructure (Sharma, 2022). Technology contributes to social transformation by enabling women to engage in income-generating activities and reducing time spent on household chores (Nurbekova et al., 2020; Owston et al., 2019). Overall, technology is a powerful tool for women's empowerment, bringing positive change in their lives and broader social impact (Ewerling et al., 2021; Tandon, 2016).

Empowerment refers to a shift from traditional management functions to a community/participant/employee empowerment model based on various leadership models. In this research, technology empowerment refers to increasing public awareness and the ability to utilize technology for educational purposes. The global tourism industry shows a significant economic impact; even amid an economic downturn, tourism can be a key factor in overcoming the crisis. This shows that tourism can empower people, and technology is an important catalyst.

It is important to distinguish between mediation and moderation variables. Mediation variables (mediators) describe the process by which two variables are interrelated. The mediator is on the causal path between the independent variable (X) and the dependent variable (Y), explaining *how* or *why* an effect occurs. In a mediation relationship, an arrow can be drawn from an independent variable to a mediator, then from a mediator to a dependent variable. In contrast, the moderation variable (moderate) affects the strength and direction of the relationship between two variables, indicating *for whom*, *when*, or *under what circumstances* a relationship will prevail, but is not part of the causal chain that connects the two. This study conceptualizes technology empowerment as a mediating variable, which means that non-formal education based on local wisdom (X) affects the accessibility of tourism education (Y) *through* increasing technology empowerment (Z). This means that NFE that integrates local wisdom will improve the ability of the community to use technology, and this increase in technological capabilities will then facilitate their access to tourism education.

Accessibility of Tourism Education

Recent research highlights the importance of accessible and inclusive tourism education. Studies show that tourism curricula often ignore the topic of disability, creating a gap in preparing students for inclusive tourism practices (Liasidou et al., 2019). However, innovative educational approaches, such as experiential learning and action-based challenges, can positively change students' attitudes toward people with disabilities and foster a commitment to accessible tourism (Freund et al., 2022). The Erasmus+ IN-TOUR project aims to address this gap by developing a competency-based curriculum for inclusive tourism management and frontline staff (Richter et al., 2022). In addition, research shows that people with disabilities have the potential, ability, and willingness to participate in tourism education programs, but face challenges due to bias and discriminatory practices (Makuyana & du Plessis, 2022). These studies emphasize the need for more inclusive tourism education to meet the growing demand for accessible services and drive social transformation within the industry. Accessibility is a concept that combines a

geographic land use management system with a transportation network system that connects it. Accessibility measures comfort or convenience related to how land use sites interact and how "easy" or "difficult" it is to reach that location. Regarding education, accessibility means everyone has equal access or opportunity to learn, regardless of background, across all types, networks, and educational paths. Education is expected to be accessible to all citizens, regardless of their social, economic, cultural, ethnic, ethnic, or religious status, including children with disabilities.

In the tourism industry, accessibility includes the means and infrastructure needed to reach a place, such as the availability of roads, means of transportation, and road signs. Good accessibility is expected to overcome various mobility barriers, both physical and non-physical, such as employment opportunities, education, or access to information. Connectivity or access is the level of ease of connecting from one place to another. This is especially true when connections can be achieved through various methods of communication. Therefore, improving technological capabilities directly increases the accessibility of tourism education by allowing more people to connect and interact during the educational process.

Conceptual Model

Based on the literature review, the conceptual model of this study proposes that non-formal education based on local wisdom (X) not only directly affects the accessibility of tourism education (Y) but also indirectly affects it *through* technological empowerment (Z). This model reflects the synergistic relationship between education, culture, and technology in advancing the accessibility of tourism education. The integrated application of non-formal education, dynamic local wisdom, and technology empowerment offers a comprehensive and sustainable model for enhancing community capacity in tourism, thereby contributing to holistic regional development.

RESEARCH METHODS

This study uses a quantitative approach and an explanatory approach to analyze the contribution of non-formal education based on local wisdom, with the mediating variables of technology empowerment on the accessibility of tourism education in Banyuwangi Regency. The relationships between variables are tested using path analysis, which allows the identification of direct and indirect influences. The research design model can be described as follows:

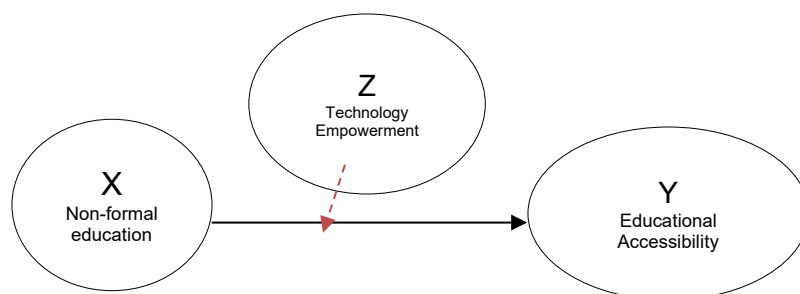


Figure 1 Research Design Model

Information:

- X : Non-formal education (independent variable)
- Y : Accessibility of Tourism Education (dependent variable)
- Z : Technology Empowerment (intervening variable)
- : Direct Influence
- .-→ : Indirect Influence

This research was conducted at Community Learning Centers (CLC) throughout Banyuwangi Regency. Data collection was carried out from May 2024 to July 2024. The population of this study is all CLC managers in Banyuwangi Regency, totaling 141 people. The population details by sub-district are as follows:

Table 1: Population Details

No	District	Number of CLC	Number of Managers
1	Estimation	2	6
2	Bangorejo	2	6
3	Purwoharjo	1	3
4	Tegaldlimo	1	3
5	Muncar	4	12
6	Cluring	1	3
7	Gambiran	0	0
8	Srono	2	6
9	Tile	2	6
10	Glenmore	1	3
11	Caliber	3	9
12	Singojuruh	2	6
13	Rogojampi	4	12
14	Kabat	2	6
15	Glagah	1	3
16	São Paulo	1	3
17	Turns	2	6
18	Wongsorejo	2	6
19	Songgon	2	6
20	Sempu	4	12
21	Calipuro	1	3
22	Siliragung	1	3
23	Tegalsari	5	15
24	Smooth	1	3
25	Blimbingsari	0	0
	Sum	47	141

Source: Secondary Research Data Processed in 2024

The sample size was determined using the Slovin formula (Juliansyah, 2015) with an error rate (e) of 10% (0.10).

$$n = \frac{N}{1 + (N \times e^2)}$$

Information:

N : number of elements/sample members

N : number of elements/members of the population

and : error rate (Note: Generally used 1% or 0.01, 5% or 0.05 and 10% or 0.1) (the researcher can select notes)

$$n = \frac{141}{1 + 141 (0,10)^2}$$

$$n = \frac{141}{2,41}$$

58.5 = $\longrightarrow$ Rounded up 59

Although the Slovin formula is practical for determining sample sizes when population information is limited, it is important to know that it has limitations. Slovin assumes a homogeneous population and does not include confidence levels or population variance in his calculations. This can result in a smaller sample size than more comprehensive methods (Banerjee & Chaudhury, 2010; Tejada & Punzalan, 2012). However, in the context of this study, the Slovin formula is used as an accessible initial approach given the research objectives.

The sampling technique used is *Disproportionate Stratified Random Sampling*. This technique was chosen because the population of CLC managers has a disproportionate number of strata (sub-districts), some of which are very small. Although this technique allows for the representation of minority subgroups, some literature suggests that this is "not a true random sample" and can be less representative if not managed carefully. The researchers made specific adjustments to ensure the proportionality of the samples, for example, for the manager population of 12, divided by 2 and subtracted by 2, to achieve a proportionate sample count of 59 in each region.

The primary data was obtained directly from the field by distributing questionnaires to CLC managers in Banyuwangi Regency. Before respondents fill out the questionnaire, the researcher gives them an explanation and the freedom to choose the answers they want. Secondary data comes from existing sources, such as the records of CLC institutions in Banyuwangi, which include their history, organizational structure, number and division of work of their managers. This study used the Likert scale to measure respondents' attitudes, opinions, and perceptions of social phenomena. Variables are measured by converting indicators into benchmarks through questions or statements. The scales used are as follows:

Table 3: Measurement Scale

Respondent's Answer	Score
Strongly agree	5
Agree	4
Agree	3
Disagree	2
Strongly Disagree	1

Source: (Nemoto & Beglar, 2014)

The product-moment correlation formula tests the instrument's validity (Weir & Hill, 2002). The extent to which an instrument can measure the intended concept is called the instrument's validity in social research. The specific types of validity (such as content or construct validity) assessed with this method are not described in detail. It is a fact that product-moment correlation is often used to measure the validity of criteria or item-total correlation. For example, the validity of the content typically requires subjective judgment by a subject matter expert to ensure that the questionnaire items measure the concepts they should. Cronbach's Alpha measures the reliability or internal consistency of a set of scale items or tests. Cronbach's Alpha values range from 0 to 1, and higher values indicate greater consistency between items. Generally recommended standards for coefficients *Alpha* are between 0.65 and 0.8, although values below 0.5 are generally unacceptable. This research instrument was declared valid and reliable.

The data analysis in this study includes inferential statistics, which are used to analyze sample data and apply the results to the population, especially in cases where samples are taken randomly from a clear population. Classical Assumption Test: a) Normality Test: aims to determine whether the disruptive or residual variables in the path analysis model have a normal distribution. Graphs, histograms, standard probability plots, and Kolmogorov-Smirnov statistical tests were used. b) Multicollinearity test: This aims to ascertain whether the independent variables in the regression model correlate. The Inflation Variation Factor (VIF) is evaluated to ensure the existence of multicollinearity; a VIF value below 10 indicates the absence of multicollinearity. c) The heteroscedasticity test aims to ascertain whether or not there is an inequality in residual variance between different data sets. The pattern of randomly spread points on the scatterplot suggests that a good regression model does not experience heteroscedasticity. The significance value of the Glejser test is more than 0.05. Path Analysis, also known as path analysis, is used to predict the magnitude of influence between dependent, independent, and mediating variables, both direct and indirect. The calculation was carried out using the IBM SPSS 26 statistical program. Hypothesis Test: a) Partial test (t-test): to determine the significant influence of each independent variable on the dependent variable. b) Simultaneous test (F test): to determine if all independent variables impact the dependent variable. Coefficient Coefficient (R²): evaluates the model's ability to explain variations in dependent variables.

RESEARCH RESULTS

Before performing the path analysis, a classical assumption test is performed to ensure that the regression analysis results are not biased.

1. Normality Test

The normality test aims to determine whether the residual in the path analysis model has a normal distribution. The results show that the residual has a normal distribution. The data patterns on the histogram graph that follow the regular line and the data distribution on the standard probability plot around the diagonal line show this. In addition, in the Residual model, the significance value of the Kolmogorov-Smirnov test was 0.417, greater than α (0.05).

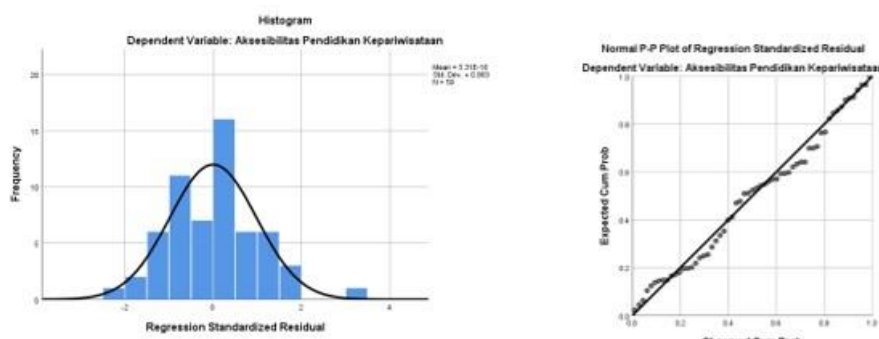


Figure 2: Normality Test Results

Table 4: Results of the Kolmogorov-Smirnov Method Normality Test

Variabel	Significance	Information
Residual Model(s)	0,417	Normally distributed

Source: Primary research data processed in 2024

2. Multicollinearity Test

A multicollinearity test was performed to determine whether or not there is a correlation between independent variables in the regression model. A good regression model does not have to correlate. To identify multicollinearity, the Variance Inflation Factor (VIF) was assessed. If the VIF value is less than 10, then multicollinearity does not exist. The test results showed that this study did not show symptoms of multicollinearity between independent variables.

Table 5: Multicollinearity Assumption Test Results

Independent Variables	Tolerance	VIVID	Information
Accessibility of Tourism Education (Y)	0,512	3,437	Multicollinearity does not occur
Technology Empowerment (Z)	0,498	3,345	Multicollinearity does not occur
NFE Based on Local Wisdom (X)	0,576	3,482	Multicollinearity does not occur

Source: Primary research data processed in 2024

3. Heteroscedasticity Test

A heteroscedasticity test was performed to determine whether the regression model had an inequality of residual variance. A good regression model does not experience heteroscedasticity. According to the scatterplot analysis results, there is no heteroscedasticity because the dots are scattered randomly and do not form a specific pattern. In addition, the Glejser test shows that all variables have significance values above 0.05.

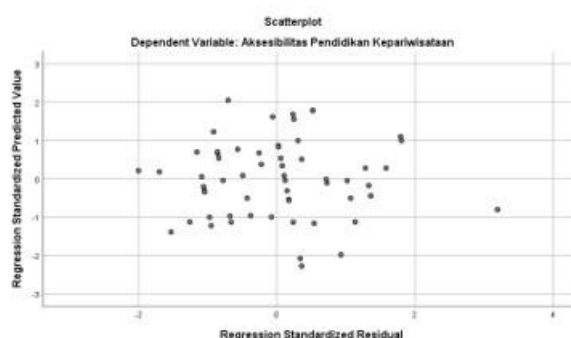


Figure 3 Heteroscedasticity Test Scatterplot

(The scatterplot image cannot be reproduced in the text, but is assumed to show a random distribution as described in the image above)

Table 6: Glejser Test Results

Independent Variables	Significance	Information
Accessibility of Tourism Education (Y)	0,679	Heteroscedasticity does not occur
Technology Empowerment (Z)	0,618	Heteroscedasticity does not occur
NFE Based on Local Wisdom (X)	0,642	Heteroscedasticity does not occur

Source: Primary research data processed in 2024

The successful fulfillment of all these classical assumptions provides strong confidence in the statistical validity of the path analysis results to be presented, ensuring that the coefficients and levels of significance found are reliable and unbiased.

Path Analysis

Path analysis calculations predict the magnitude of the influence between the research variables.

First Substructure Path Equation: The Influence of Local Wisdom (X) Based NFE on Tourism Education

Accessibility (Y)

Table 7: X-Line Analysis Test Results

Type	Beta	R Square
(Constant)	23,657	0,421
NFE Based on Local Wisdom (X)	0,623	

Source: Primary research data processed in 2024

The value of ϵ (coefficient of error) is calculated as $\sqrt{1 - R^2} = \sqrt{1 - 0.421} = 0.761$.

The path model based on the analysis results is $Y = 23.657 + 0.623 X + 0.761 \epsilon$.

Interpretation:

The constant (23,657) shows that if the Local Wisdom Based NFE (X) does not contribute, the Accessibility of Tourism Education (Y) will be worth 23,657.

The path coefficient for X (0.623) indicates that every 1 unit increase in the Local Wisdom-Based NFE (X) will increase the Accessibility of Tourism Education (Y) by 0.623, assuming other variables are constant.

The error coefficient (0.761) indicates the influence of other unstudied factors on this first substructure.

Equation of the Second Substructure Pathway: The Influence of Technology Empowerment (Z) on Tourism Education Accessibility (Y)

Table 8: Results of the Z-Line Analysis Test

Type	Beta	R Square
(Constant)	22,482	0,342
Technology Empowerment (Z)	0,591	

Source: Primary research data processed in 2024

The value of ϵ (coefficient of error) is calculated as $\sqrt{1 - R^2} = \sqrt{1 - 0.342} = 0.811$.

The path model based on the analysis results is $Y = 22.482 + 0.591 Z + 0.811 \epsilon$.

Interpretation:

The constant (22,482) shows that if there is no contribution from the Technology Empowerment variable (Z), Tourism Education Accessibility (Y) will be worth 22,482.

The path coefficient for Z (0.591) indicates that every 1 unit increase in Technology Empowerment (Z) will increase Tourism Education Accessibility (Y) by 0.591, assuming other variables are constant. The error coefficient (0.811) indicates the influence of other factors not studied on this second substructure.

Third Substructure Pathway Equation: The Influence of Local Wisdom-Based NFE (X) and Technology Empowerment (Z) on Tourism Education Accessibility (Y)

Table 9: Results of the X and Z Strip Analysis Test

Type	Beta	R Square
(Constant)	10,467	0,651
NFE Based on Local Wisdom (X)	0,317	
Technology Empowerment (Z)	0,396	

Source: Primary research data processed in 2024

The value of ϵ (coefficient of error) is calculated as $\sqrt{1 - R^2} = \sqrt{1 - 0.651} = 0.5907$.

The path model based on the analysis results is $Y = 10.467 + 0.317 X + 0.396 Z + 0.5907 \epsilon$.

Interpretation:

The constant (10.467) shows that if there is no contribution from the variables of NFE Based on Local Wisdom (X) and Technology Empowerment (Z), the Accessibility of Tourism Education (Y) will be worth 10.467. The path coefficient for X (0.317) indicates that every 1 unit increase in the Local Wisdom-Based NFE (X) will increase the Accessibility of Tourism Education (Y) by 0.317, assuming other variables are constant. The path coefficient for Z (0.396) indicates that every 1 unit increase in Technology Empowerment (Z) will increase Tourism Education Accessibility (Y) by 0.396, assuming other variables are constant. The error coefficient (0.5907) indicates the influence of other unstudied factors on this third substructure.

Comparison of the X to Y path coefficients of the First Substructure (0.623) and the Third Substructure (0.317) showed a decrease in the value of the coefficient when the mediation variable Z was included in the model. This decline is a strong indication of the mediating effect of the Technology Empowerment variable (Z), which explains how Local Wisdom-Based NFE (X) affects Tourism Education Accessibility (Y) indirectly.

Hypothesis Testing

Partial Test (t-test)

Partial testing is used to determine whether each independent variable significantly influences the dependent variable. An independent variable is considered significant if the t-count is greater than the t-table or the significance is less than $\alpha = 0.05$.

Table 10: Partial Test Results (t-test)

Independent Variables	t-count	Significance	T-Table	Information
NFE Based on Local Wisdom (X)	7,745	0,000	2,013	Signifikan
Technology Empowerment (Z)	6,829	0,000	2,013	Signifikan

Source: Primary research data processed in 2024

Local Wisdom-Based NFE (X): The t-calculated value is 7.745 with a significance of 0.000. Because t-count (7.745) > t-table (2.013) and significance (0.000) < α (0.05), it is concluded that NFE based on local wisdom (X) partially has a significant influence on Accessibility of Tourism Education (Y).

Technology Empowerment (Z): The t-count value is 6.829 with a significance of 0.000. Because t-count (6.829) > t-table (2.013) and significance (0.000) < α (0.05), it is concluded that Technology Empowerment (Z) partially has a significant influence on Tourism Education Accessibility (Y).

Simultaneous Test (F Test)

The statistical test F shows whether all the independent variables included in the model influence the dependent variables together. Suppose the F-sig value is smaller than 0.05 or the F-count is greater than the F-table. In that case, the null (H_0) hypothesis is rejected, which means that the independent variables simultaneously affect the dependent variables significantly.

Table 11: Simultaneous Test Results (F Test)

Type	Df	F-Table	F-count	Significance
Regression	3	7,41	29,138	0,000
Remnant	56			

Total	59			
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Source: Primary research data processed in 2024

Based on Table 11, the F-count is 29.138, which is significant at 0.000. The F-table at the real level of 5% with 3 and 56 degrees of freedom is 7.41. Since the F-count (29.138) > the F-table (7.41) and the significance (0.000) < 0.05, H_0 was rejected. This means that together the variables of NFE Based on Local Wisdom (X) and Technology Empowerment (Z) have a significant influence on the variables of Accessibility of Tourism Education (Y). Furthermore, it can be concluded that the NFE variable is based on local wisdom (X),

The Technology Empowerment variable (Z) significantly influences the Tourism Education Accessibility variable (Y).

Coefficient of Determination (R^2)

The coefficient of determination (R^2) measures how well the model can explain variations in dependent variables. This study uses the *Adjusted R Square* to evaluate the best track model.

Table 12: Coefficient of Determination (R^2)

R	R Square	R Adjusted Square
0,901	0,481	0,498

Source: Primary research data processed in 2024

Based on the analysis, the *value of Adjusted R Square* is 0.498 or 49.8%. This means that 49.8% of the variation in tourism education accessibility (Y) can be explained by the NFE variables based on local wisdom (X) and technology empowerment (Z). Other variables outside the regression equation explained the remaining 50.2% which was not studied in this study.

DISCUSSION

This study shows that non-formal education based on local wisdom and technology empowerment significantly contributes to the accessibility of tourism education in Banyuwangi Regency. These findings provide a deeper understanding of the mechanisms underlying improved access to education in the tourism sector, especially in the context of culturally rich and rapidly developing regions.

The Influence of Local Wisdom-Based Non-Formal Education on the Accessibility of Tourism Education

The study results show that the NFE variable based on local wisdom (X) partially significantly influences the accessibility of tourism education (Y). These findings are consistent with the characteristics of NFE, which are flexible and adaptable to the needs and interests of students. (Kedrayate, 2012; Zemaitaityte, 2017) NFE has a curriculum and methodology that is not rigid and different from formal education, but still meets the agreed standards (Gohn, 2006). It also affirms that NFE is flexible in curriculum and methodology, focusing on students' needs and interests.

Local wisdom in Banyuwangi, such as the Seblang Dance tradition or the culture of the Osing Tribe, provides relevant context and content for NFE. Integrating local wisdom allows NFE to provide more meaningful education per the community's daily life. NFE that utilizes local wisdom can effectively convey tourism knowledge, as learning materials become more relevant and readily accepted by the community. In addition, the inclusive nature of NFE and its ability to reach marginalized groups, who may find it difficult to access formal education, further strengthen its role in improving the accessibility of tourism education.

The Influence of Technology Empowerment on Tourism Education Accessibility

The technology empowerment variable (Z) also partially significantly influences the accessibility of tourism education (Y). Accessibility, as expressed by Freund et al. (2022), is a measure of comfort or convenience related to how land-use locations interact with each other and how easily those locations are accessible. In the context of education, the empowerment of technology directly enhances this convenience. Technology can reduce various mobility barriers, both physical and non-physical, associated with access to education and information.

Technology allows for a broader and more efficient dissemination of tourism information and educational materials. For

example, through online platforms or mobile applications, people in Banyuwangi can access information about tourist destinations, ecotourism practices, or tourism-related skills without being tied to a specific location or time. This aligns with the view (Ribot & Peluso, 2003) that connectivity or access is the ease of connecting from one place to another, especially if the connection can be made using various means of communication. Therefore, increasing public awareness and the ability to utilize technology directly facilitates their access to tourism education.

The Role of Technology Empowerment Mediation

The key finding of this study is that non-formal education based on local wisdom (X), *through* the technology empowerment variable (Z), significantly influences the accessibility of tourism education (Y). This means that technology empowerment acts as a mechanism or pathway through which local wisdom-based NFE impacts the accessibility of tourism education.

The explanation of this mediation relationship is as follows: NFE programs that integrate local wisdom tend to increase awareness and technological skills among the community. For example, NFEs can teach how to use digital technology to document and promote local traditions (local wisdom) relevant to tourism. This improvement of technological capabilities then directly facilitates public access to tourism-related resources and learning opportunities. In other words, NFE, rooted in local wisdom, provides direct knowledge and equips students with tools (technology) that allow them to access more information and tourism education opportunities independently. This is in line with the opinion of Widi et al. (2013) that educational accessibility means that everyone has equal access to education regardless of social status or background. In tourism, Onainor (2019) emphasizes that accessibility includes the means and infrastructure to reach destinations, including road access, transportation, and signage, all of which can be improved with technology.

Theoretical Implications

The mediation model ($X \rightarrow Z \rightarrow Y$) found in this study significantly contributes to existing theories in non-formal education, local wisdom, technology adoption, and tourism development. The study broadens the understanding of how non-formal education, enriched with local cultural contexts, can effectively utilize technology as an intermediary to improve educational accessibility. This suggests that technology empowerment is not just a supporting factor, but is a causal mechanism that links culture-based education efforts with broader accessibility outcomes.

Furthermore, these findings underscore the dynamic nature of local wisdom. Instead of being seen as a static tradition, local wisdom has proven to be integrated with technological innovations and NFE programs to create a relevant development model in the modern era. This research provides empirical evidence on how synergy between NFE, adaptive local wisdom, and technology empowerment can build measurable community capacity, supporting sustainable tourism development. It offers a new theoretical perspective on how cultural capital can be activated through education and technology to achieve the goals of economic and social development.

Practical Implications

The results of this study have substantial practical implications for policy makers, CLC managers, and tourism industry stakeholders in Banyuwangi and other areas with similar characteristics. For CLC Managers: It is recommended to continue to develop technology integration in the NFE program. This includes developing digital content that specifically incorporates local wisdom into the tourism education curriculum, for example, through online interactive learning modules or mobile applications that introduce Osing culture or Banyuwangi ecotourism destinations. Continuous training for CLC managers is also important to improve their digital literacy and pedagogical skills in delivering technology-supported NFEs, ensuring a teaching format that is accessible to a diverse range of learners, including marginalized groups. For Local Governments/Policy Makers (Banyuwangi Regency): Recommendations include resource allocation and policy support for NFE initiatives focused on tourism, especially those that leverage local wisdom and technology. Improving digital infrastructure and internet access in rural areas is important to facilitate broader technology empowerment for tourism education. Local governments can promote NFE as a tool for inclusive tourism, reaching segments of the population who may not have access to formal education. The role of the Regent, as mentioned in the literature review, is vital in directing tourism development that involves community participation and the use of technology. For Tourism Industry Stakeholders: Collaboration with CLC is highly recommended to develop tourism education content that is relevant to the needs of the industry and incorporates local cultural nuances. The use of NFE graduates who have been technologically empowered and have an understanding of local wisdom can support community-

based tourism initiatives, which in turn sustainably strengthen the local economy.

Overall, these findings show that a holistic approach that integrates education, culture, and technology is essential for tourism's sustainable and inclusive development.

LIMITATIONS AND FURTHER RESEARCH

Although this research makes an important contribution, some limitations must be acknowledged. First, the geographical scope of this study is limited to Banyuwangi Regency, so generalization of the findings to other regions may require further study. Second, data is collected through a *self-reported* questionnaire, which may have the potential for response bias. Third, the use of the Slovin formula for sample size, while practical, has limitations in accommodating population confidence or variance, which can affect statistical accuracy. Fourth, although the instrument's reliability was tested with *Cronbach's Alpha*, and validity with *the product-moment correlation*, other types of validity, such as content or construct validity, are not explicitly described, which may limit a comprehensive understanding of the instrument's validity.

The *Adjusted R Square* value of 49.8% indicates that about half of the variation in tourism education accessibility is explained by this model, but the remaining 50.2% is still unexplained. This indicates that there are other significant factors affecting the accessibility of tourism education that are not included in this research model. Therefore, further research can explore additional variables that may contribute to the accessibility of tourism education, such as government support, community participation, NFE curriculum quality, or economic factors. Qualitative studies can also be conducted to gain a deeper understanding of the mechanisms behind the relationship between variables and the direct experience of CLC managers. In addition, comparative research in other regions with different cultural contexts and levels of technological development can provide broader insights and reinforce the external validity of these findings.

CONCLUSION

Based on the results of the research and discussion, it can be concluded that several main things related to the contribution of non-formal education based on local wisdom and technological empowerment to the accessibility of tourism education in Banyuwangi Regency can be concluded:

The Non-Formal Education Variable Based on Local Wisdom (X) partially significantly influences the Accessibility of Tourism Education (Y) variable. This is supported by a t-calculated value of 7.745, which is larger than the t-table (2.013), and a significance value of 0.000, which is smaller than $\alpha = 0.05$.

The Technology Empowerment variable (Z) partially significantly influences the Tourism Education Accessibility variable (Y). This finding is supported by a t-count value of 6.829, which is larger than the t-table (2.013), and a significance value of 0.000, which is smaller than $\alpha = 0.05$.

Together, the variables of Non-Formal Education Based on Local Wisdom (X) and Technology Empowerment (Z) significantly influence the variables of Accessibility of Tourism Education (Y). This is shown by an F-calculated value of 29.138, which is larger than the F-table (7.41), and a significance value of 0.000, which is smaller than $\alpha = 0.05$.

It can be concluded that the variable of Non-Formal Education Based on Local Wisdom (X), *through* the variable of Technology Empowerment (Z), significantly influences the variable of Accessibility of Tourism Education (Y). This confirms the important mediating role of technology empowerment in facilitating access to tourism education rooted in local wisdom.

Suggestion

Based on the conclusions of this study, several suggestions can be given to improve the accessibility of tourism education in Banyuwangi Regency:

For CLC Managers: It is recommended that technology be continued to develop and integrate into non-formal education programs. This includes creating innovative and engaging digital content that incorporates Banyuwangi's local wisdom into the tourism education curriculum. Improving managers' and students' digital literacy and technology use skills will make tourism education more holistic and accessible.

The Regional Government of Banyuwangi Regency is expected to provide policy support and greater allocation of funds for

the development of non-formal education programs that focus on tourism, especially those that prioritize local wisdom and the use of technology. Investing in digital infrastructure across regions, particularly in remote areas, will go a long way in expanding the reach of tourism education.

For Tourism Communities and Stakeholders: It is important to encourage active community participation in developing the NFE curriculum based on local wisdom and the use of technology. Collaboration between CLC, tourism industry players, and local communities can create a learning ecosystem that is more responsive to the needs of the tourism market while preserving local culture.

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